SEQUENCE LISTING

<110> Bristol-Myers Squibb Company

<120> A NOVEL HUMAN G-PROTEIN COUPLED RECEPTOR, HGPRBMY9, EXPRESSED HIGHLY IN BRAIN AND TESTES

<130> D0045A CIP

<150> U.S. 09/964,923
<151> 2001-09-26

<150> U.S. 60/235,709
<151> 2000-09-27

<150> U.S. 60/261,775
<151> 2001-01-16

<150> U.S. 60/309,625
<151> 2001-08-02

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<170> PatentIn version 3.2

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Asn Lys Ser Trp Asn Lys Glu Phe Ala Tyr Gln Thr Ala Ser Val Val
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Asp Thr Val Ile Leu Pro Ser Met Ile Gly Ile Ile Cys Ser Thr Gly
        35                  40                  45


Leu Val Gly Asn Ile Leu Ile Val Phe Thr Ile Ile Arg Ser Arg Lys
    50                  55                  60


Lys Thr Val Pro Asp Ile Tyr Ile Cys Asn Leu Ala Val Ala Asp Leu
65                  70                  75                  80


Val His Ile Val Gly Met Pro Phe Leu Ile His Gln Trp Ala Arg Gly
                85                  90                  95


Gly Glu Trp Val Phe Gly Gly Pro Leu Cys Thr Ile Ile Thr Ser Leu
            100                 105                 110


Asp Thr Cys Asn Gln Phe Ala Cys Ser Ala Ile Met Thr Val Met Ser
        115                 120                 125


Val Asp Arg Tyr Phe Ala Leu Val Gln Pro Phe Arg Leu Thr Arg Trp
    130                 135                 140


Arg Thr Arg Tyr Lys Thr Ile Arg Ile Asn Leu Gly Leu Trp Ala Ala
145                 150                 155                 160
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Ser Phe Ile Leu Ala Leu Pro Val Trp Val Tyr Ser Lys Val Ile Lys
                165                 170                 175

Phe Lys Asp Gly Val Glu Ser Cys Ala Phe Asp Leu Thr Ser Pro Asp
            180                 185                 190

Asp Val Leu Trp Tyr Thr Leu Tyr Leu Thr Ile Thr Thr Phe Phe Phe
        195                 200                 205

Pro Leu Pro Leu Ile Leu Val Cys Tyr Ile Leu Ile Leu Cys Tyr Thr
    210                 215                 220

Trp Glu Met Tyr Gln Gln Asn Lys Asp Ala Arg Cys Cys Asn Pro Ser
225                 230                 235                 240

Val Pro Lys Gln Arg Val Met Lys Leu Thr Lys Met Val Leu Val Leu
                245                 250                 255

Val Val Val Phe Ile Leu Ser Ala Ala Pro Tyr His Val Ile Gln Leu
            260                 265                 270

Val Asn Leu Gln Met Glu Gln Pro Thr Leu Ala Phe Tyr Val Gly Tyr
        275                 280                 285

Tyr Leu Ser Ile Cys Leu Ser Tyr Ala Ser Ser Ser Ile Asn Pro Phe
    290                 295                 300

Leu Tyr Ile Leu Leu Ser Gly Asn Phe Gln Lys Arg Leu Pro Gln Ile
305                 310                 315                 320

Gln Arg Arg Ala Thr Glu Lys Glu Ile Asn Asn Met Gly Asn Thr Leu
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Lys Ser His Phe
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<213> Homo sapiens

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<210>  8
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His Gln Glu Thr His Gly Glu Gly Lys Arg Asp Lys Ile Ser Asn Ser
            20                  25                  30


Glu Gly Arg Glu Asn Gly Gly Arg Gly Phe Gln Met Asn Gly Gly Ser
        35                  40                  45


Leu Glu Ala Glu His Ala Ser Arg Met Ser Val Leu Arg Ala Lys Pro
    50                  55                  60


Met Ser Asn Ser Gln Arg Leu Leu Leu Leu Ser Pro Gly Ser Pro Pro
65                  70                  75                  80


Arg Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe
                85                  90                  95


Gly Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe
            100                 105                 110
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Ala Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp
        115                 120                 125

Ile Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly
    130                 135                 140

Met Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe
145                 150                 155                 160

Gly Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln
                165                 170                 175

Phe Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu
            180                 185                 190

Ala Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val
        195                 200                 205

Ala Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile
    210                 215                 220

Thr Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala
225                 230                 235                 240

Val Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp
                245                 250                 255

Phe Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val
            260                 265                 270

Ile Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val
        275                 280                 285

Ala Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr
    290                 295                 300

Arg Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro
305                 310                 315                 320

Tyr Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu
                325                 330                 335
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Thr Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn
340 345 350

Ser Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg
355 360 365

Lys Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg
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Ala Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys
385 390 395 400

Gly Thr

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<212> PRT
<213> Rattus norvegicus

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Ile Ser Asp Gly Gln Asp Asn Leu Thr Leu Pro Gly Ser Pro Pro Arg
20 25 30

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35 40 45

Thr Ile Cys Leu Leu Gly Ile Val Gly Asn Ser Thr Val Ile Phe Ala
50 55 60

Val Val Lys Lys Ser Lys Leu His Trp Cys Ser Asn Val Pro Asp Ile
65 70 75 80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125

```
Thr Ser Thr Tyr Ile Leu Thr Ala Met Thr Ile Asp Arg Tyr Leu Ala
    130                 135                 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Met Ala
145                 150                 155                 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
                165                 170                 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
            180                 185                 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
        195                 200                 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
    210                 215                 220

Thr Ala Ala Tyr Val Lys Ile Leu Gln Arg Met Thr Ser Ser Val Ala
225                 230                 235                 240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
                245                 250                 255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
            260                 265                 270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
        275                 280                 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
    290                 295                 300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
305                 310                 315                 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Thr
                325                 330                 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
            340                 345                 350
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Thr



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<212>  PRT
<213>  Mus musculus

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Ser Pro Ser Ala Cys Leu Leu Pro Asn Ser Ser Ser Trp Phe Pro Asn
            20                  25                  30


Trp Ala Glu Ser Asp Ser Asn Gly Ser Val Gly Ser Glu Asp Gln Gln
        35                  40                  45


Leu Glu Ser Ala His Ile Ser Pro Ala Ile Pro Val Ile Ile Thr Ala
    50                  55                  60


Val Tyr Ser Val Val Phe Val Val Gly Leu Val Gly Asn Ser Leu Val
65                  70                  75                  80


Met Phe Val Ile Ile Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile
                85                  90                  95


Tyr Ile Phe Asn Leu Ala Leu Ala Asp Ala Leu Val Thr Thr Thr Met
            100                 105                 110


Pro Phe Gln Ser Ala Val Tyr Leu Met Asn Ser Trp Pro Phe Gly Asp
        115                 120                 125


Val Leu Cys Lys Ile Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr
    130                 135                 140


Ser Ile Phe Thr Leu Thr Met Met Ser Val Asp Arg Tyr Ile Ala Val
145                 150                 155                 160


Cys His Pro Val Lys Ala Leu Asp Phe Arg Thr Pro Leu Lys Ala Lys
                165                 170                 175


Ile Ile Asn Ile Cys Ile Trp Leu Leu Ala Ser Ser Val Gly Ile Ser
```

```
            180                 185                 190

Ala Ile Val Leu Gly Gly Thr Lys Val Arg Glu Asp Val Asp Val Ile
        195                 200                 205

Glu Cys Ser Leu Gln Phe Pro Asp Asp Glu Tyr Ser Trp Trp Asp Leu
    210                 215                 220

Phe Met Lys Ile Cys Val Phe Val Phe Ala Phe Val Ile Pro Val Leu
225                 230                 235                 240

Ile Ile Ile Val Cys Tyr Thr Leu Met Ile Leu Arg Leu Lys Ser Val
                245                 250                 255

Arg Leu Leu Ser Gly Ser Arg Glu Lys Asp Arg Asn Leu Arg Arg Ile
            260                 265                 270

Thr Lys Leu Val Leu Val Val Val Ala Val Phe Ile Ile Cys Trp Thr
        275                 280                 285

Pro Ile His Ile Phe Ile Leu Val Glu Ala Leu Gly Ser Thr Ser His
    290                 295                 300

Ser Thr Ala Ala Leu Ser Ser Tyr Tyr Phe Cys Ile Ala Leu Gly Tyr
305                 310                 315                 320

Thr Asn Ser Ser Leu Asn Pro Val Leu Tyr Ala Phe Leu Asp Glu Asn
                325                 330                 335

Phe Lys Arg Cys Phe Arg Asp Phe Cys Phe Pro Ile Lys Met Arg Met
            340                 345                 350

Glu Arg Gln Ser Thr Asn Arg Val Arg Asn Thr Val Gln Asp Pro Ala
        355                 360                 365

Ser Met Arg Asp Val Gly Gly Met Asn Lys Pro Val
    370                 375                 380

<210>  11
<211>  380
<212>  PRT
<213>  Rattus norvegicus

<400>  11
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Met Glu Ser Pro Ile Gln Ile Phe Arg Gly Glu Pro Gly Pro Thr Cys
1               5                   10                  15

Ala Pro Ser Ala Cys Leu Leu Pro Asn Ser Ser Ser Trp Phe Pro Asn
            20                  25                  30

Trp Ala Glu Ser Asp Ser Asn Gly Ser Val Gly Ser Glu Asp Gln Gln
        35                  40                  45

Leu Glu Pro Ala His Ile Ser Pro Ala Ile Pro Val Ile Ile Thr Ala
    50                  55                  60

Val Tyr Ser Val Val Phe Val Val Gly Leu Val Gly Asn Ser Leu Val
65                  70                  75                  80

Met Phe Val Ile Ile Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile
                85                  90                  95

Tyr Ile Phe Asn Leu Ala Leu Ala Asp Ala Leu Val Thr Thr Thr Met
            100                 105                 110

Pro Phe Gln Ser Ala Val Tyr Leu Met Asn Ser Trp Pro Phe Gly Asp
        115                 120                 125

Val Leu Cys Lys Ile Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr
    130                 135                 140

Ser Ile Phe Thr Leu Thr Met Met Ser Val Asp Arg Tyr Ile Ala Val
145                 150                 155                 160

Cys His Pro Val Lys Ala Leu Asp Phe Arg Thr Pro Leu Lys Ala Lys
                165                 170                 175

Ile Ile Asn Ile Cys Ile Trp Leu Leu Ala Ser Ser Val Gly Ile Ser
            180                 185                 190

Ala Ile Val Leu Gly Gly Thr Lys Val Arg Glu Asp Val Asp Val Ile
        195                 200                 205

Glu Cys Ser Leu Gln Phe Pro Asp Asp Glu Tyr Ser Trp Trp Asp Leu
    210                 215                 220
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```
Phe Met Lys Ile Cys Val Phe Val Phe Ala Phe Val Ile Pro Val Leu
225                 230                 235                 240

Ile Ile Ile Val Cys Tyr Thr Leu Met Ile Leu Arg Leu Lys Ser Val
                245                 250                 255

Arg Leu Leu Ser Gly Ser Arg Glu Lys Asp Arg Asn Leu Arg Arg Ile
            260                 265                 270

Thr Lys Leu Val Leu Val Val Val Ala Val Phe Ile Ile Cys Trp Thr
        275                 280                 285

Pro Ile His Ile Phe Ile Leu Val Glu Ala Leu Gly Ser Thr Ser His
    290                 295                 300

Ser Thr Ala Val Leu Ser Ser Tyr Tyr Phe Cys Ile Ala Leu Gly Tyr
305                 310                 315                 320

Thr Asn Ser Ser Leu Asn Pro Val Leu Tyr Ala Phe Leu Asp Glu Asn
                325                 330                 335

Phe Lys Arg Cys Phe Arg Asp Phe Cys Phe Pro Ile Lys Met Arg Met
            340                 345                 350

Glu Arg Gln Ser Thr Asn Arg Val Arg Asn Thr Val Gln Asp Pro Ala
        355                 360                 365

Ser Met Arg Asp Val Gly Gly Met Asn Lys Pro Val
    370                 375                 380


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<211>  391
<212>  PRT
<213>  Homo sapiens

<400>  12

Met Phe Pro Asn Gly Thr Ala Ser Ser Pro Ser Ser Ser Pro Ser Pro
1               5                   10                  15

Ser Pro Gly Ser Cys Gly Glu Gly Gly Gly Ser Arg Gly Pro Gly Ala
            20                  25                  30

Gly Ala Ala Asp Gly Met Glu Glu Pro Gly Arg Asn Ala Ser Gln Asn
        35                  40                  45
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```
Gly Thr Leu Ser Glu Gly Gln Gly Ser Ala Ile Leu Ile Ser Phe Ile
    50                  55                  60

Tyr Ser Val Val Cys Leu Val Gly Leu Cys Gly Asn Ser Met Val Ile
65                  70                  75                  80

Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ala Thr Asn Ile Tyr
                85                  90                  95

Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Leu Met Leu Ser Val Pro
            100                 105                 110

Phe Leu Val Thr Ser Thr Leu Leu Arg His Trp Pro Phe Gly Ala Leu
        115                 120                 125

Leu Cys Arg Leu Val Leu Ser Val Asp Ala Val Asn Met Phe Thr Ser
    130                 135                 140

Ile Tyr Cys Leu Thr Val Leu Ser Val Asp Arg Tyr Val Ala Val Val
145                 150                 155                 160

His Pro Ile Lys Ala Ala Arg Tyr Arg Arg Pro Thr Val Ala Lys Val
                165                 170                 175

Val Asn Leu Gly Val Trp Val Leu Ser Leu Leu Val Ile Leu Pro Ile
            180                 185                 190

Val Val Phe Ser Arg Thr Ala Ala Asn Ser Asp Gly Thr Val Ala Cys
        195                 200                 205

Asn Met Leu Met Pro Glu Pro Ala Gln Arg Trp Leu Val Gly Phe Val
    210                 215                 220

Leu Tyr Thr Phe Leu Met Gly Phe Leu Leu Pro Val Gly Ala Ile Cys
225                 230                 235                 240

Leu Cys Tyr Val Leu Ile Ile Ala Lys Met Arg Met Val Ala Leu Lys
                245                 250                 255

Ala Gly Trp Gln Gln Arg Lys Arg Ser Glu Arg Lys Ile Thr Leu Met
            260                 265                 270
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Val Met Met Val Val Met Val Phe Val Ile Cys Trp Met Pro Phe Tyr
        275   280   285

Val Val Gln Leu Val Asn Val Phe Ala Glu Gln Asp Asp Ala Thr Val
    290   295   300

Ser Gln Leu Ser Val Ile Leu Gly Tyr Ala Asn Ser Cys Ala Asn Pro
305   310   315   320

Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Lys Arg Ser Phe Gln Arg
                325   330   335

Ile Leu Cys Leu Ser Trp Met Asp Asn Ala Ala Glu Glu Pro Val Asp
            340   345   350

Tyr Tyr Ala Thr Ala Leu Lys Ser Arg Ala Tyr Ser Val Glu Asp Phe
        355   360   365

Gln Pro Glu Asn Leu Glu Ser Gly Gly Val Phe Arg Asn Gly Thr Cys
    370   375   380

Thr Ser Arg Ile Thr Thr Leu
385   390

<210> 13
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<212> PRT
<213> Mus musculus

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Met Phe Pro Asn Gly Thr Ala Ser Ser Pro Ser Ser Ser Pro Ser Pro
1   5   10   15

Ser Pro Gly Ser Cys Gly Glu Gly Ala Cys Ser Arg Gly Pro Gly Ser
            20   25   30

Gly Ala Ala Asp Gly Met Glu Glu Pro Gly Arg Asn Ala Ser Gln Asn
        35   40   45

Gly Thr Leu Ser Glu Gly Gln Gly Ser Ala Ile Leu Ile Ser Phe Ile
    50   55   60

Tyr Ser Val Val Cys Leu Val Gly Leu Cys Gly Asn Ser Met Val Ile

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65                  70                  75                  80

Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ala Thr Asn Ile Tyr
                85                  90                  95

Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Leu Met Leu Ser Val Pro
            100                 105                 110

Phe Leu Val Thr Ser Thr Leu Leu Arg His Trp Pro Phe Gly Ala Leu
        115                 120                 125

Leu Cys Arg Leu Val Leu Ser Val Asp Ala Val Asn Met Phe Thr Ser
    130                 135                 140

Ile Tyr Cys Leu Thr Val Leu Ser Val Asp Arg Tyr Val Ala Val Val
145                 150                 155                 160

His Pro Ile Lys Ala Ala Arg Tyr Arg Arg Pro Thr Val Ala Lys Val
                165                 170                 175

Val Asn Leu Gly Val Trp Val Leu Ser Leu Leu Val Ile Leu Pro Ile
            180                 185                 190

Val Val Phe Ser Arg Thr Ala Ala Asn Ser Asp Gly Thr Val Ala Cys
        195                 200                 205

Asn Met Leu Met Pro Glu Pro Ala Gln Arg Trp Leu Val Gly Phe Val
    210                 215                 220

Leu Tyr Thr Phe Leu Met Gly Phe Leu Leu Pro Val Gly Ala Ile Cys
225                 230                 235                 240

Leu Cys Tyr Val Leu Ile Ile Ala Lys Met Arg Met Val Ala Leu Lys
                245                 250                 255

Ala Gly Trp Gln Gln Arg Lys Arg Ser Glu Arg Lys Ile Thr Leu Met
            260                 265                 270

Val Met Met Val Val Met Val Phe Val Ile Cys Trp Met Pro Phe Tyr
        275                 280                 285

Val Val Gln Leu Val Asn Val Phe Ala Glu Gln Asp Asp Ala Thr Val
    290                 295                 300
```

Ser Gln Leu Ser Val Ile Leu Gly Tyr Ala Asn Ser Cys Ala Asn Pro
305 310 315 320

Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Lys Arg Ser Phe Gln Arg
325 330 335

Ile Leu Cys Leu Ser Trp Met Asp Asn Ala Ala Glu Glu Pro Val Asp
340 345 350

Tyr Tyr Ala Thr Ala Leu Lys Ser Arg Ala Tyr Ser Val Glu Asp Phe
355 360 365

Gln Pro Glu Asn Leu Glu Ser Gly Gly Val Phe Arg Asn Gly Thr Cys
370 375 380

Ala Ser Arg Ile Ser Thr Leu
385 390

<210> 14
<211> 391
<212> PRT
<213> Rattus norvegicus

<400> 14

Met Phe Pro Asn Gly Thr Ala Pro Ser Pro Thr Ser Ser Pro Ser Ser
1 5 10 15

Ser Pro Gly Gly Cys Gly Glu Gly Val Cys Ser Arg Gly Pro Gly Ser
20 25 30

Gly Ala Ala Asp Gly Met Glu Glu Pro Gly Arg Asn Ser Ser Gln Asn
35 40 45

Gly Thr Leu Ser Glu Gly Gln Gly Ser Ala Ile Leu Ile Ser Phe Ile
50 55 60

Tyr Ser Val Val Cys Leu Val Gly Leu Cys Gly Asn Ser Met Val Ile
65 70 75 80

Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ala Thr Asn Ile Tyr
85 90 95

```
Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Leu Met Leu Ser Val Pro
            100                 105                 110

Phe Leu Val Thr Ser Thr Leu Leu Arg His Trp Pro Phe Gly Ala Leu
        115                 120                 125

Leu Cys Arg Leu Val Leu Ser Val Asp Ala Val Asn Met Phe Thr Ser
    130                 135                 140

Ile Tyr Cys Leu Thr Val Leu Ser Val Asp Arg Tyr Val Ala Val Val
145                 150                 155                 160

His Pro Ile Lys Ala Ala Arg Tyr Arg Arg Pro Thr Val Ala Lys Val
                165                 170                 175

Val Asn Leu Gly Val Trp Val Leu Ser Leu Leu Val Ile Leu Pro Ile
            180                 185                 190

Val Val Phe Ser Arg Thr Ala Ala Asn Ser Asp Gly Thr Val Ala Cys
        195                 200                 205

Asn Met Leu Met Pro Glu Pro Ala Gln Arg Trp Leu Val Gly Phe Val
    210                 215                 220

Leu Tyr Thr Phe Leu Met Gly Phe Leu Leu Pro Val Gly Ala Ile Cys
225                 230                 235                 240

Leu Cys Tyr Val Leu Ile Ile Ala Lys Met Arg Met Val Ala Leu Lys
                245                 250                 255

Ala Gly Trp Gln Gln Arg Lys Arg Ser Glu Arg Lys Ile Thr Leu Met
            260                 265                 270

Val Met Met Val Val Met Val Phe Val Ile Cys Trp Met Pro Phe Tyr
        275                 280                 285

Val Val Gln Leu Val Asn Val Phe Ala Glu Gln Asp Asp Ala Thr Val
    290                 295                 300

Ser Gln Leu Ser Val Ile Leu Gly Tyr Ala Asn Ser Cys Ala Asn Pro
305                 310                 315                 320

Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Lys Arg Ser Phe Gln Arg
```

325 330 335

Ile Leu Cys Leu Ser Trp Met Asp Asn Ala Ala Glu Glu Pro Val Asp
340 345 350

Tyr Tyr Ala Thr Ala Leu Lys Ser Arg Ala Tyr Ser Val Glu Asp Phe
355 360 365

Gln Pro Glu Asn Leu Glu Ser Gly Gly Val Phe Arg Asn Gly Thr Cys
370 375 380

Ala Ser Arg Ile Ser Thr Leu
385 390

<210> 15
<211> 388
<212> PRT
<213> Homo sapiens

<400> 15

Met Ser Ala Pro Ser Thr Leu Pro Pro Gly Gly Glu Glu Gly Leu Gly
1 5 10 15

Thr Ala Trp Pro Ser Ala Ala Asn Ala Ser Ser Ala Pro Ala Glu Ala
20 25 30

Glu Glu Ala Val Ala Gly Pro Gly Asp Ala Arg Ala Ala Gly Met Val
35 40 45

Ala Ile Gln Cys Ile Tyr Ala Leu Val Cys Leu Val Gly Leu Val Gly
50 55 60

Asn Ala Leu Val Ile Phe Val Ile Leu Arg Tyr Ala Lys Met Lys Thr
65 70 75 80

Ala Thr Asn Ile Tyr Leu Leu Asn Leu Ala Val Ala Asp Glu Leu Phe
85 90 95

Met Leu Ser Val Pro Phe Val Ala Ser Ser Ala Ala Leu Arg His Trp
100 105 110

Pro Phe Gly Ser Val Leu Cys Arg Ala Val Leu Ser Val Asp Gly Leu
115 120 125

```
Asn Met Phe Thr Ser Val Phe Cys Leu Thr Val Leu Ser Val Asp Arg
    130                 135                 140

Tyr Val Ala Val Val His Pro Leu Arg Ala Ala Thr Tyr Arg Arg Pro
145                 150                 155                 160

Ser Val Ala Lys Leu Ile Asn Leu Gly Val Trp Leu Ala Ser Leu Leu
                165                 170                 175

Val Thr Leu Pro Ile Ala Ile Phe Ala Asp Thr Arg Pro Ala Arg Gly
            180                 185                 190

Gly Gln Ala Val Ala Cys Asn Leu Gln Trp Pro His Pro Ala Trp Ser
        195                 200                 205

Ala Val Phe Val Val Tyr Thr Phe Leu Leu Gly Phe Leu Leu Pro Val
    210                 215                 220

Leu Ala Ile Gly Leu Cys Tyr Leu Leu Ile Val Gly Lys Met Arg Ala
225                 230                 235                 240

Val Ala Leu Arg Ala Gly Trp Gln Gln Arg Arg Arg Ser Glu Lys Lys
                245                 250                 255

Ile Thr Arg Leu Val Leu Met Val Val Val Val Phe Val Leu Cys Trp
            260                 265                 270

Met Pro Phe Tyr Val Val Gln Leu Leu Asn Leu Val Val Thr Ser Leu
        275                 280                 285

Asp Ala Thr Val Asn His Val Ser Leu Ile Leu Ser Tyr Ala Asn Ser
    290                 295                 300

Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Arg Arg
305                 310                 315                 320

Ser Phe Gln Arg Val Leu Cys Leu Arg Cys Cys Leu Leu Glu Gly Ala
                325                 330                 335

Gly Gly Ala Glu Glu Glu Pro Leu Asp Tyr Tyr Ala Thr Ala Leu Lys
            340                 345                 350
```

```
Ser Lys Gly Gly Ala Gly Cys Met Cys Pro Pro Leu Pro Cys Gln Gln
        355                 360                 365

Glu Ala Leu Gln Pro Glu Pro Gly Arg Lys Arg Ile Pro Leu Thr Arg
    370                 375                 380

Thr Thr Thr Phe
385


<210>  16
<211>  428
<212>  PRT
<213>  Mus musculus

<400>  16

Met Ala Thr Val Thr Tyr Pro Ser Ser Glu Pro Met Thr Leu Asp Pro
1               5                   10                  15

Gly Asn Thr Ser Ser Thr Trp Pro Leu Asp Thr Thr Leu Gly Asn Thr
            20                  25                  30

Ser Ala Gly Ala Ser Leu Thr Gly Leu Ala Val Ser Gly Ile Leu Ile
        35                  40                  45

Ser Leu Val Tyr Leu Val Val Cys Val Val Gly Leu Leu Gly Asn Ser
    50                  55                  60

Leu Val Ile Tyr Val Val Leu Arg His Thr Ser Ser Pro Ser Val Thr
65                  70                  75                  80

Ser Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Glu Leu Phe Met Leu
                85                  90                  95

Gly Leu Pro Phe Leu Ala Ala Gln Asn Ala Leu Ser Tyr Trp Pro Phe
            100                 105                 110

Gly Ser Leu Met Cys Arg Leu Val Met Ala Val Asp Gly Ile Asn Gln
        115                 120                 125

Phe Thr Ser Ile Phe Cys Leu Thr Val Met Ser Val Asp Arg Tyr Leu
    130                 135                 140

Ala Val Val His Pro Thr Arg Ser Ala Arg Trp Arg Thr Ala Pro Val
145                 150                 155                 160
```

```
Ala Arg Thr Val Ser Arg Ala Val Trp Val Ala Ser Ala Val Val Val
                165                 170                 175

Leu Pro Val Val Val Phe Ser Gly Val Pro Arg Gly Met Ser Thr Cys
            180                 185                 190

His Met Gln Trp Pro Glu Pro Ala Ala Ala Trp Arg Thr Ala Phe Ile
        195                 200                 205

Ile Tyr Met Ala Ala Leu Gly Phe Phe Gly Pro Leu Leu Val Ile Cys
    210                 215                 220

Leu Cys Tyr Leu Leu Ile Val Val Lys Val Arg Ser Thr Thr Arg Arg
225                 230                 235                 240

Val Arg Ala Pro Ser Cys Gln Trp Val Gln Ala Pro Ala Cys Gln Arg
                245                 250                 255

Arg Arg Arg Ser Glu Arg Arg Val Thr Arg Met Val Val Ala Val Val
            260                 265                 270

Ala Leu Phe Val Leu Cys Trp Met Pro Phe Tyr Leu Leu Asn Ile Val
        275                 280                 285

Asn Val Val Cys Pro Leu Pro Glu Glu Pro Ala Phe Phe Gly Leu Tyr
    290                 295                 300

Phe Leu Val Val Ala Leu Pro Tyr Ala Asn Ser Cys Ala Asn Pro Ile
305                 310                 315                 320

Leu Tyr Gly Phe Leu Ser Tyr Arg Phe Lys Gln Gly Phe Arg Arg Ile
                325                 330                 335

Leu Leu Arg Pro Ser Arg Arg Ile Arg Ser Gln Glu Pro Gly Ser Gly
            340                 345                 350

Pro Pro Glu Lys Thr Glu Glu Glu Glu Asp Glu Glu Glu Glu Glu Arg
        355                 360                 365

Arg Glu Glu Glu Glu Arg Arg Met Gln Arg Gly Gln Glu Met Asn Gly
    370                 375                 380
```

Arg Leu Ser Gln Ile Ala Gln Ala Gly Thr Ser Gly Gln Gln Pro Arg
385 390 395 400

Pro Cys Thr Gly Thr Ala Lys Glu Gln Gln Leu Leu Pro Gln Glu Ala
405 410 415

Thr Ala Gly Asp Lys Ala Ser Thr Leu Ser His Leu
420 425

<210> 17
<211> 428
<212> PRT
<213> Rattus norvegicus

<400> 17

Met Ala Ala Val Thr Tyr Pro Ser Ser Val Pro Thr Thr Leu Asp Pro
1 5 10 15

Gly Asn Ala Ser Ser Ala Trp Pro Leu Asp Thr Ser Leu Gly Asn Ala
20 25 30

Ser Ala Gly Thr Ser Leu Ala Gly Leu Ala Val Ser Gly Ile Leu Ile
35 40 45

Ser Leu Val Tyr Leu Val Val Cys Val Val Gly Leu Leu Gly Asn Ser
50 55 60

Leu Val Ile Tyr Val Val Leu Arg His Thr Ser Ser Pro Ser Val Thr
65 70 75 80

Ser Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Glu Leu Phe Met Leu
85 90 95

Gly Leu Pro Phe Leu Ala Ala Gln Asn Ala Leu Ser Tyr Trp Pro Phe
100 105 110

Gly Ser Leu Met Cys Arg Leu Val Met Ala Val Asp Gly Ile Asn Gln
115 120 125

Phe Thr Ser Ile Phe Cys Leu Thr Val Met Ser Val Asp Arg Tyr Leu
130 135 140

Ala Val Val His Pro Thr Arg Ser Ala Arg Trp Arg Thr Ala Pro Val

```
145                 150                 155                 160

Ala Arg Met Val Ser Ala Ala Val Trp Val Ala Ser Ala Val Val Val
                165                 170                 175

Leu Pro Val Val Val Phe Ser Gly Val Pro Arg Gly Met Ser Thr Cys
            180                 185                 190

His Met Gln Trp Pro Glu Pro Ala Ala Ala Trp Arg Thr Ala Phe Ile
        195                 200                 205

Ile Tyr Thr Ala Ala Leu Gly Phe Phe Gly Pro Leu Leu Val Ile Cys
    210                 215                 220

Leu Cys Tyr Leu Leu Ile Val Val Lys Val Arg Ser Thr Thr Arg Arg
225                 230                 235                 240

Val Arg Ala Pro Ser Cys Gln Trp Val Gln Ala Pro Ala Cys Gln Arg
                245                 250                 255

Arg Arg Arg Ser Glu Arg Arg Val Thr Arg Met Val Val Ala Val Val
            260                 265                 270

Ala Leu Phe Val Leu Cys Trp Met Pro Phe Tyr Leu Leu Asn Ile Val
        275                 280                 285

Asn Val Val Cys Pro Leu Pro Glu Glu Pro Ala Phe Phe Gly Leu Tyr
    290                 295                 300

Phe Leu Val Val Ala Leu Pro Tyr Ala Asn Ser Cys Ala Asn Pro Ile
305                 310                 315                 320

Leu Tyr Gly Phe Leu Ser Tyr Arg Phe Lys Gln Gly Phe Arg Arg Ile
                325                 330                 335

Leu Leu Arg Pro Ser Arg Arg Val Arg Ser Gln Glu Pro Gly Ser Gly
            340                 345                 350

Pro Pro Glu Lys Thr Glu Glu Glu Glu Asp Glu Glu Glu Glu Glu Arg
        355                 360                 365

Arg Glu Glu Glu Glu Arg Arg Met Gln Arg Gly Gln Glu Met Asn Gly
    370                 375                 380
```

```
Arg Leu Ser Gln Ile Ala Gln Pro Gly Pro Ser Gly Gln Gln Gln Arg
385                 390                 395                 400


Pro Cys Thr Gly Thr Ala Lys Glu Gln Gln Leu Leu Pro Gln Glu Ala
                405                 410                 415


Thr Ala Gly Asp Lys Ala Ser Thr Leu Ser His Leu
            420                 425


<210>  18
<211>  418
<212>  PRT
<213>  Homo sapiens

<400>  18

Met Asp Met Leu His Pro Ser Ser Val Ser Thr Thr Ser Glu Pro Glu
1               5                   10                  15


Asn Ala Ser Ser Ala Trp Pro Pro Asp Ala Thr Leu Gly Asn Val Ser
            20                  25                  30


Ala Gly Pro Ser Pro Ala Gly Leu Ala Val Ser Gly Val Leu Ile Pro
        35                  40                  45


Leu Val Tyr Leu Val Val Cys Val Val Gly Leu Leu Gly Asn Ser Leu
    50                  55                  60


Val Ile Tyr Val Val Leu Arg His Thr Ala Ser Pro Ser Val Thr Asn
65                  70                  75                  80


Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Glu Leu Phe Met Leu Gly
                85                  90                  95


Leu Pro Phe Leu Ala Ala Gln Asn Ala Leu Ser Tyr Trp Pro Phe Gly
            100                 105                 110


Ser Leu Met Cys Arg Leu Val Met Ala Val Asp Gly Ile Asn Gln Phe
        115                 120                 125


Thr Ser Ile Phe Cys Leu Thr Val Met Ser Val Asp Arg Tyr Leu Ala
    130                 135                 140
```

```
Val Val His Pro Thr Arg Ser Ala Arg Trp Arg Thr Ala Pro Val Ala
145                 150                 155                 160

Arg Thr Val Ser Ala Ala Val Trp Val Ala Ser Ala Val Val Val Leu
                165                 170                 175

Pro Val Val Val Phe Ser Gly Val Pro Arg Gly Met Ser Thr Cys His
            180                 185                 190

Met Gln Trp Pro Glu Pro Ala Ala Ala Trp Arg Ala Gly Phe Ile Ile
        195                 200                 205

Tyr Thr Ala Ala Leu Gly Phe Phe Gly Pro Leu Leu Val Ile Cys Leu
    210                 215                 220

Cys Tyr Leu Leu Ile Val Val Lys Val Arg Ser Ala Gly Arg Arg Val
225                 230                 235                 240

Trp Ala Pro Ser Cys Gln Arg Arg Arg Arg Ser Glu Arg Arg Val Thr
                245                 250                 255

Arg Met Val Val Ala Val Val Ala Leu Phe Val Leu Cys Trp Met Pro
            260                 265                 270

Phe Tyr Val Leu Asn Ile Val Asn Val Val Cys Pro Leu Pro Glu Glu
        275                 280                 285

Pro Ala Phe Phe Gly Leu Tyr Phe Leu Val Val Ala Leu Pro Tyr Ala
    290                 295                 300

Asn Ser Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Tyr Arg Phe
305                 310                 315                 320

Lys Gln Gly Phe Arg Arg Val Leu Leu Arg Pro Ser Arg Arg Val Arg
                325                 330                 335

Ser Gln Glu Pro Thr Val Gly Pro Pro Glu Lys Thr Glu Glu Glu Asp
            340                 345                 350

Glu Glu Glu Glu Asp Gly Glu Glu Ser Arg Glu Gly Gly Lys Gly Lys
        355                 360                 365

Glu Met Asn Gly Arg Val Ser Gln Ile Thr Gln Pro Gly Thr Ser Gly
```

370 375 380

Gln Glu Arg Pro Pro Ser Arg Val Ala Ser Lys Glu Gln Gln Leu Leu
385 390 395 400

Pro Gln Glu Ala Ser Thr Gly Glu Lys Ser Ser Thr Met Arg Ile Ser
405 410 415

Tyr Leu

<210> 19
<211> 369
<212> PRT
<213> Mus musculus

<400> 19

Met Glu Met Ser Ser Glu Gln Leu Asn Gly Ser Gln Val Trp Val Ser
1 5 10 15

Ser Pro Phe Asp Leu Asn Gly Ser Leu Gly Pro Ser Asn Gly Ser Asn
20 25 30

Gln Thr Glu Pro Tyr Tyr Asp Met Thr Ser Asn Ala Val Leu Thr Phe
35 40 45

Ile Tyr Phe Val Val Cys Val Val Gly Leu Cys Gly Asn Thr Leu Val
50 55 60

Ile Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile
65 70 75 80

Tyr Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu
85 90 95

Pro Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys
100 105 110

Ala Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr
115 120 125

Ser Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val
130 135 140

```
Val His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys
145                 150                 155                 160

Met Ile Asn Val Ala Val Trp Cys Val Ser Leu Leu Val Ile Leu Pro
                165                 170                 175

Ile Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser
            180                 185                 190

Cys Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe
        195                 200                 205

Ile Ile Tyr Ala Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile
    210                 215                 220

Cys Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile
225                 230                 235                 240

Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Thr Arg
                245                 250                 255

Met Val Ser Ile Val Val Ala Val Phe Ile Phe Cys Trp Leu Pro Phe
            260                 265                 270

Tyr Ile Phe Asn Val Ser Ser Val Ser Val Ala Ile Ser Pro Thr Pro
        275                 280                 285

Ala Leu Lys Gly Met Phe Asp Phe Val Val Ile Leu Thr Tyr Ala Asn
    290                 295                 300

Ser Cys Ala Asn Pro Ile Leu Tyr Ala Phe Leu Ser Asp Asn Phe Lys
305                 310                 315                 320

Lys Ser Phe Gln Asn Val Leu Cys Leu Val Lys Val Ser Gly Thr Glu
                325                 330                 335

Asp Gly Glu Arg Ser Asp Ser Lys Gln Asp Lys Ser Arg Leu Asn Glu
            340                 345                 350

Thr Thr Glu Thr Gln Arg Thr Leu Leu Asn Gly Asp Leu Gln Thr Ser
        355                 360                 365
```

```
Ile


<210>  20
<211>  369
<212>  PRT
<213>  Rattus norvegicus

<400>  20

Met Glu Leu Thr Ser Glu Gln Phe Asn Gly Ser Gln Val Trp Ile Pro
1               5                   10                  15


Ser Pro Phe Asp Leu Asn Gly Ser Leu Gly Pro Ser Asn Gly Ser Asn
            20                  25                  30


Gln Thr Glu Pro Tyr Tyr Asp Met Thr Ser Asn Ala Val Leu Thr Phe
        35                  40                  45


Ile Tyr Phe Val Val Cys Val Val Gly Leu Cys Gly Asn Thr Leu Val
    50                  55                  60


Ile Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile
65                  70                  75                  80


Tyr Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu
                85                  90                  95


Pro Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys
            100                 105                 110


Ala Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr
        115                 120                 125


Ser Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val
    130                 135                 140


Val His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys
145                 150                 155                 160


Met Ile Asn Val Ala Val Trp Gly Val Ser Leu Leu Val Ile Leu Pro
                165                 170                 175


Ile Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser
            180                 185                 190
```

```
Cys Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe
        195                 200                 205

Ile Ile Tyr Ala Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile
    210                 215                 220

Cys Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile
225                 230                 235                 240

Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Thr Arg
                245                 250                 255

Met Val Ser Ile Val Val Ala Val Phe Ile Phe Cys Trp Leu Pro Phe
            260                 265                 270

Tyr Ile Phe Asn Val Ser Ser Val Ser Val Ala Ile Ser Pro Thr Pro
        275                 280                 285

Ala Leu Lys Gly Met Phe Asp Phe Val Val Ile Leu Thr Tyr Ala Asn
    290                 295                 300

Ser Cys Ala Asn Pro Ile Leu Tyr Ala Phe Leu Ser Asp Asn Phe Lys
305                 310                 315                 320

Lys Ser Phe Gln Asn Val Leu Cys Leu Val Lys Val Ser Gly Ala Glu
                325                 330                 335

Asp Gly Glu Arg Ser Asp Ser Lys Gln Asp Lys Ser Arg Leu Asn Glu
            340                 345                 350

Thr Thr Glu Thr Gln Arg Thr Leu Leu Asn Gly Asp Leu Gln Thr Ser
        355                 360                 365

Ile


<210>  21
<211>  368
<212>  PRT
<213>  BOVINE

<400>  21
```

```
Met Asp Leu Val Ser Glu Leu Asn Glu Thr Gln Pro Trp Leu Thr Thr
1               5                   10                  15

Pro Phe Asp Leu Asn Gly Ser Val Gly Ala Ala Asn Ile Ser Asn Gln
            20                  25                  30

Thr Glu Pro Tyr Tyr Asp Leu Ala Ser Asn Val Val Leu Thr Phe Ile
        35                  40                  45

Tyr Phe Val Val Cys Ile Ile Gly Leu Cys Gly Asn Thr Leu Val Ile
    50                  55                  60

Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile Tyr
65                  70                  75                  80

Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu Pro
                85                  90                  95

Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys Ala
            100                 105                 110

Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr Ser
        115                 120                 125

Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val Val
    130                 135                 140

His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys Met
145                 150                 155                 160

Ile Asn Val Ala Val Trp Gly Val Ser Leu Leu Val Ile Leu Pro Ile
                165                 170                 175

Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser Cys
            180                 185                 190

Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe Ile
        195                 200                 205

Ile Tyr Ala Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile Cys
    210                 215                 220

Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile Arg
```

```
225                 230                 235                 240

Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Thr Arg Met
                245                 250                 255

Val Ser Ile Val Val Ala Val Phe Ile Phe Cys Trp Leu Pro Phe Tyr
            260                 265                 270

Ile Phe Asn Val Ser Ser Val Ser Val Ala Ile Ser Pro Thr Pro Ala
        275                 280                 285

Leu Lys Gly Met Phe Asp Phe Val Val Val Leu Thr Tyr Ala Asn Ser
    290                 295                 300

Cys Ala Asn Pro Ile Leu Tyr Ala Phe Leu Ser Asp Asn Phe Lys Lys
305                 310                 315                 320

Ser Phe Gln Asn Val Leu Cys Leu Val Lys Val Ser Gly Thr Asp Asp
                325                 330                 335

Gly Glu Arg Ser Asp Ser Lys Gln Asp Lys Ser Arg Leu Asn Glu Thr
            340                 345                 350

Thr Glu Thr Gln Arg Thr Leu Leu Asn Gly Asp Leu Gln Thr Ser Ile
        355                 360                 365


<210>  22
<211>  369
<212>  PRT
<213>  PIG

<400>  22

Met Asp Met Ala Tyr Glu Leu Leu Asn Gly Ser Gln Pro Trp Leu Ser
1               5                   10                  15

Ser Pro Phe Asp Leu Asn Gly Ser Val Ala Thr Ala Asn Ser Ser Asn
            20                  25                  30

Gln Thr Glu Pro Tyr Tyr Asp Leu Thr Ser Asn Ala Val Leu Thr Phe
        35                  40                  45

Ile Tyr Phe Val Val Cys Ile Ile Gly Leu Cys Gly Asn Thr Leu Val
    50                  55                  60
```

```
Ile Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile
65                  70                  75                  80

Tyr Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu
                85                  90                  95

Pro Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys
            100                 105                 110

Ala Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr
        115                 120                 125

Ser Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val
    130                 135                 140

Val His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys
145                 150                 155                 160

Met Ile Asn Val Ala Val Trp Gly Val Ser Leu Leu Val Ile Leu Pro
                165                 170                 175

Ile Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser
            180                 185                 190

Cys Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe
        195                 200                 205

Ile Ile Tyr Ala Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile
    210                 215                 220

Cys Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile
225                 230                 235                 240

Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Thr Arg
                245                 250                 255

Met Val Ser Ile Val Val Ala Val Phe Ile Phe Cys Trp Leu Pro Phe
            260                 265                 270

Tyr Ile Phe Asn Val Ser Ser Val Ser Val Ala Ile Ser Pro Thr Pro
        275                 280                 285
```

```
Ala Leu Lys Gly Met Phe Asp Phe Val Val Val Leu Thr Tyr Ala Asn
    290             295                     300

Ser Cys Ala Asn Pro Ile Leu Tyr Ala Phe Leu Ser Asp Asn Phe Lys
305                 310                 315                 320

Lys Ser Phe Gln Asn Val Leu Cys Leu Val Lys Val Ser Gly Thr Asp
                325                 330                 335

Asp Gly Glu Arg Ser Asp Ser Lys Gln Asp Lys Ser Arg Leu Asn Glu
            340                 345                 350

Thr Thr Glu Thr Gln Arg Thr Leu Leu Asn Gly Asp Leu Gln Thr Ser
        355                 360                 365

Ile



<210>  23
<211>  369
<212>  PRT
<213>  Homo sapiens

<400>  23

Met Asp Met Ala Asp Glu Pro Leu Asn Gly Ser His Thr Trp Leu Ser
1               5                   10                  15

Ile Pro Phe Asp Leu Asn Gly Ser Val Val Ser Thr Asn Thr Ser Asn
            20                  25                  30

Gln Thr Glu Pro Tyr Tyr Asp Leu Thr Ser Asn Ala Val Leu Thr Phe
        35                  40                  45

Ile Tyr Phe Val Val Cys Ile Ile Gly Leu Cys Gly Asn Thr Leu Val
    50                  55                  60

Ile Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile
65                  70                  75                  80

Tyr Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu
                85                  90                  95

Pro Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys
            100                 105                 110
```

```
Ala Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr
        115                 120                 125

Ser Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val
    130                 135                 140

Val His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys
145                 150                 155                 160

Met Ile Thr Met Ala Val Trp Gly Val Ser Leu Leu Val Ile Leu Pro
                165                 170                 175

Ile Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser
            180                 185                 190

Cys Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe
        195                 200                 205

Ile Ile Tyr Thr Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile
    210                 215                 220

Cys Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile
225                 230                 235                 240

Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Thr Arg
                245                 250                 255

Met Val Ser Ile Val Val Ala Val Phe Ile Phe Cys Trp Leu Pro Phe
            260                 265                 270

Tyr Ile Phe Asn Val Ser Ser Val Ser Met Ala Ile Ser Pro Thr Pro
        275                 280                 285

Ala Leu Lys Gly Met Phe Asp Phe Val Val Val Leu Thr Tyr Ala Asn
    290                 295                 300

Ser Cys Ala Asn Pro Ile Leu Tyr Ala Phe Leu Ser Asp Asn Phe Lys
305                 310                 315                 320

Lys Ser Phe Gln Asn Val Leu Cys Leu Val Lys Val Ser Gly Thr Asp
                325                 330                 335
```

Asp Gly Glu Arg Ser Asp Ser Lys Gln Asp Lys Ser Arg Leu Asn Glu
340 345 350

Thr Thr Glu Thr Gln Arg Thr Leu Leu Asn Gly Asp Leu Gln Thr Ser
355 360 365

Ile

<210> 24
<211> 362
<212> PRT
<213> Mus musculus

<400> 24

Met Glu Pro Leu Ser Leu Ala Ser Thr Pro Ser Trp Asn Ala Ser Ala
1 5 10 15

Ala Ser Ser Gly Ser His Asn Trp Ser Leu Val Asp Pro Val Ser Pro
20 25 30

Met Gly Ala Arg Ala Val Leu Val Pro Val Leu Tyr Leu Leu Val Cys
35 40 45

Thr Val Gly Leu Gly Gly Asn Thr Leu Val Ile Tyr Val Val Leu Arg
50 55 60

Tyr Ala Lys Met Lys Thr Val Thr Asn Val Tyr Ile Leu Asn Leu Ala
65 70 75 80

Val Ala Asp Val Leu Phe Met Leu Gly Leu Pro Phe Leu Ala Thr Gln
85 90 95

Asn Ala Val Ser Tyr Trp Pro Phe Gly Ser Phe Leu Cys Arg Leu Val
100 105 110

Met Thr Leu Asp Gly Ile Asn Gln Phe Thr Ser Ile Phe Cys Leu Met
115 120 125

Val Met Ser Val Asp Arg Tyr Leu Ala Val Val His Pro Leu Arg Ser
130 135 140

Ala Arg Trp Arg Arg Pro Arg Val Ala Lys Leu Ala Ser Ala Ala Val

```
145                 150                 155                 160

Trp Val Phe Ser Leu Leu Met Ser Leu Pro Leu Leu Val Phe Ala Asp
                165                 170                 175

Val Gln Glu Gly Trp Gly Thr Cys Asn Leu Ser Trp Pro Glu Pro Val
            180                 185                 190

Gly Leu Trp Gly Ala Ala Phe Ile Thr Tyr Thr Ser Val Leu Gly Phe
        195                 200                 205

Phe Gly Pro Leu Leu Val Ile Cys Leu Cys Tyr Leu Leu Ile Val Val
    210                 215                 220

Lys Val Lys Ala Ala Gly Met Arg Val Gly Ser Ser Arg Arg Arg Arg
225                 230                 235                 240

Ser Glu Arg Lys Val Thr Arg Met Val Val Val Val Val Leu Val Phe
                245                 250                 255

Val Gly Cys Trp Leu Pro Phe Phe Ile Val Asn Ile Val Asn Leu Ala
            260                 265                 270

Phe Thr Leu Pro Glu Glu Pro Thr Ser Ala Gly Leu Tyr Phe Phe Val
        275                 280                 285

Val Val Leu Ser Tyr Ala Asn Ser Cys Ala Asn Pro Leu Leu Tyr Gly
    290                 295                 300

Phe Leu Ser Asp Asn Phe Arg Gln Ser Phe Arg Lys Ala Leu Cys Leu
305                 310                 315                 320

Arg Arg Gly Tyr Gly Val Glu Asp Ala Asp Ala Ile Glu Pro Arg Pro
                325                 330                 335

Asp Lys Ser Gly Arg Pro Gln Thr Thr Leu Pro Thr Arg Ser Cys Glu
            340                 345                 350

Ala Asn Gly Leu Met Gln Thr Ser Arg Leu
        355                 360

<210>  25
<211>  363
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<212>  PRT
<213>  Rattus norvegicus

<400>  25

Met Glu Pro Leu Ser Leu Ala Ser Thr Pro Ser Trp Asn Ala Ser Ala
1               5                   10                  15


Ala Ser Ser Gly Asn His Asn Trp Ser Leu Val Gly Ser Ala Ser Pro
            20                  25                  30


Met Gly Ala Arg Ala Val Leu Val Pro Val Leu Tyr Leu Leu Val Cys
        35                  40                  45


Thr Val Gly Leu Ser Gly Asn Thr Leu Val Ile Tyr Val Val Leu Arg
    50                  55                  60


His Ala Lys Met Lys Thr Val Thr Asn Val Tyr Ile Leu Asn Leu Ala
65                  70                  75                  80


Val Ala Asp Val Leu Phe Met Leu Gly Leu Pro Phe Leu Ala Thr Gln
                85                  90                  95


Asn Ala Val Val Ser Tyr Trp Pro Phe Gly Ser Phe Leu Cys Arg Leu
            100                 105                 110


Val Met Thr Leu Asp Gly Ile Asn Gln Phe Thr Ser Ile Phe Cys Leu
        115                 120                 125


Met Val Met Ser Val Asp Arg Tyr Leu Ala Val Val His Pro Leu Arg
    130                 135                 140


Ser Ala Arg Trp Arg Arg Pro Arg Val Ala Lys Met Ala Ser Ala Ala
145                 150                 155                 160


Val Trp Val Phe Ser Leu Leu Met Ser Leu Pro Leu Leu Val Phe Ala
                165                 170                 175


Asp Val Gln Glu Gly Trp Gly Thr Cys Asn Leu Ser Trp Pro Glu Pro
            180                 185                 190


Val Gly Leu Trp Gly Ala Ala Phe Ile Thr Tyr Thr Ser Val Leu Gly
        195                 200                 205
```

```
Phe Phe Gly Pro Leu Leu Val Ile Cys Leu Cys Tyr Leu Leu Ile Val
    210                 215                 220

Val Lys Val Lys Ala Ala Gly Met Arg Val Gly Ser Ser Arg Arg Arg
225                 230                 235                 240

Arg Ser Glu Pro Lys Val Thr Arg Met Val Val Val Val Val Leu Val
                245                 250                 255

Phe Val Gly Cys Trp Leu Pro Phe Phe Ile Val Asn Ile Val Asn Leu
            260                 265                 270

Ala Phe Thr Leu Pro Glu Glu Pro Thr Ser Ala Gly Leu Tyr Phe Phe
        275                 280                 285

Val Val Val Leu Ser Tyr Ala Asn Ser Cys Ala Asn Pro Leu Leu Tyr
    290                 295                 300

Gly Phe Leu Ser Asp Asn Phe Arg Gln Ser Phe Arg Lys Val Leu Cys
305                 310                 315                 320

Leu Arg Arg Gly Tyr Gly Met Glu Asp Ala Asp Ala Ile Glu Pro Arg
                325                 330                 335

Pro Asp Lys Ser Gly Arg Pro Gln Ala Thr Leu Pro Thr Arg Ser Cys
            340                 345                 350

Glu Ala Asn Gly Leu Met Gln Thr Ser Arg Ile
        355                 360


<210>  26
<211>  363
<212>  PRT
<213>  Homo sapiens

<400>  26

Met Glu Pro Leu Phe Pro Ala Ser Thr Pro Ser Trp Asn Ala Ser Ser
1               5                   10                  15

Pro Gly Ala Ala Ser Gly Gly Gly Asp Asn Arg Thr Leu Val Gly Pro
            20                  25                  30

Ala Pro Ser Ala Gly Ala Arg Ala Val Leu Val Pro Val Leu Tyr Leu
        35                  40                  45
```

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Leu Val Cys Ala Ala Gly Leu Gly Gly Asn Thr Leu Val Ile Tyr Val
    50                  55                  60

Val Leu Arg Phe Ala Lys Met Lys Thr Val Thr Asn Ile Tyr Ile Leu
65                  70                  75                  80

Asn Leu Ala Val Ala Asp Val Leu Tyr Met Leu Gly Leu Pro Phe Leu
                85                  90                  95

Ala Thr Gln Asn Ala Ala Ser Phe Trp Pro Phe Gly Pro Val Leu Cys
            100                 105                 110

Arg Leu Val Met Thr Leu Asp Gly Val Asn Gln Phe Thr Ser Val Phe
        115                 120                 125

Cys Leu Thr Val Met Ser Val Asp Arg Tyr Leu Ala Val Val His Pro
    130                 135                 140

Leu Ser Ser Ala Arg Trp Arg Arg Pro Arg Val Ala Lys Leu Ala Ser
145                 150                 155                 160

Ala Ala Ala Trp Val Leu Ser Leu Cys Met Ser Leu Pro Leu Leu Val
                165                 170                 175

Phe Ala Asp Val Gln Glu Gly Gly Thr Cys Asn Ala Ser Trp Pro Glu
            180                 185                 190

Pro Val Gly Leu Trp Gly Ala Val Phe Ile Ile Tyr Thr Ala Val Leu
        195                 200                 205

Gly Phe Phe Ala Pro Leu Leu Val Ile Cys Leu Cys Tyr Leu Leu Ile
    210                 215                 220

Val Val Lys Val Arg Ala Ala Gly Val Arg Val Gly Cys Val Arg Arg
225                 230                 235                 240

Arg Ser Glu Arg Lys Val Thr Arg Met Val Leu Val Val Val Leu Val
                245                 250                 255

Phe Ala Gly Cys Trp Leu Pro Phe Phe Thr Val Asn Ile Val Asn Leu
            260                 265                 270
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Ala Val Ala Leu Pro Gln Glu Pro Ala Ser Ala Gly Leu Tyr Phe Phe
275 280 285

Val Val Ile Leu Ser Tyr Ala Asn Ser Cys Ala Asn Pro Val Leu Tyr
290 295 300

Gly Phe Leu Ser Asp Asn Phe Arg Gln Ser Phe Gln Lys Val Leu Cys
305 310 315 320

Leu Arg Lys Gly Ser Gly Ala Lys Asp Ala Asp Ala Thr Glu Pro Arg
325 330 335

Pro Asp Arg Ile Arg Gln Gln Gln Glu Ala Thr Arg Pro Arg Thr Ala
340 345 350

Ala Ala Asn Gly Leu Met Gln Thr Ser Lys Leu
355 360

<210> 27
<211> 39
<212> PRT
<213> Homo sapiens

<400> 27

Met Asn Pro Phe His Ala Ser Cys Trp Asn Thr Ser Ala Glu Leu Leu
1 5 10 15

Asn Lys Ser Trp Asn Lys Glu Phe Ala Tyr Gln Thr Ala Ser Val Val
20 25 30

Asp Thr Val Ile Leu Pro Ser
35

<210> 28
<211> 9
<212> PRT
<213> Homo sapiens

<400> 28

Arg Ser Arg Lys Lys Thr Val Pro Asp
1 5

<210> 29
<211> 14

<212> PRT
<213> Homo sapiens

<400> 29

His Gln Trp Ala Arg Gly Gly Glu Trp Val Phe Gly Gly Pro
1 5 10

<210> 30
<211> 20
<212> PRT
<213> Homo sapiens

<400> 30

Asp Arg Tyr Phe Ala Leu Val Gln Pro Phe Arg Leu Thr Arg Trp Arg
1 5 10 15

Thr Arg Tyr Lys
20

<210> 31
<211> 27
<212> PRT
<213> Homo sapiens

<400> 31

Ser Lys Val Ile Lys Phe Lys Asp Gly Val Glu Ser Cys Ala Phe Asp
1 5 10 15

Leu Thr Ser Pro Asp Asp Val Leu Trp Tyr Thr
20 25

<210> 32
<211> 31
<212> PRT
<213> Homo sapiens

<400> 32

Leu Cys Tyr Thr Trp Glu Met Tyr Gln Gln Asn Lys Asp Ala Arg Cys
1 5 10 15

Cys Asn Pro Ser Val Pro Lys Gln Arg Val Met Lys Leu Thr Lys
20 25 30

<210> 33
<211> 11
<212> PRT

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<213>  Homo sapiens

<400>  33

Gln Leu Val Asn Leu Gln Met Glu Gln Pro Thr
1               5                   10


<210>  34
<211>  31
<212>  PRT
<213>  Homo sapiens

<400>  34

Ser Gly Asn Phe Gln Lys Arg Leu Pro Gln Ile Gln Arg Arg Ala Thr
1               5                   10                  15


Glu Lys Glu Ile Asn Asn Met Gly Asn Thr Leu Lys Ser His Phe
            20                  25                  30


<210>  35
<211>  20
<212>  DNA
<213>  Homo sapiens

<400>  35
ttgatccgga tggtcttgta                                                    20


<210>  36
<211>  20
<212>  DNA
<213>  Homo sapiens

<400>  36
cctctctgca ccatcatcac                                                    20


<210>  37
<211>  17
<212>  DNA
<213>  Homo sapiens

<400>  37
agccgagcca catcgct                                                       17


<210>  38
<211>  19
<212>  DNA
<213>  Homo sapiens

<400>  38
gtgaccaggc gcccaatac                                                     19
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<210> 39
<211> 28
<212> DNA
<213> Homo sapiens

<400> 39
caaatccgtt gactccgacc ttcacctt 28

<210> 40
<211> 13
<212> PRT
<213> Homo sapiens

<400> 40

Phe Thr Ile Ile Arg Ser Arg Lys Lys Thr Val Pro Asp
1 5 10

<210> 41
<211> 13
<212> PRT
<213> Homo sapiens

<400> 41

Arg Thr Arg Tyr Lys Thr Ile Arg Ile Asn Leu Gly Leu
1 5 10

<210> 42
<211> 13
<212> PRT
<213> Homo sapiens

<400> 42

Ile Gln Arg Arg Ala Thr Glu Lys Glu Ile Asn Asn Met
1 5 10

<210> 43
<211> 11
<212> PRT
<213> Homo sapiens

<400> 43

Asn Asn Met Gly Asn Thr Leu Lys Ser His Phe
1 5 10

<210> 44
<211> 14

<212> PRT
<213> Homo sapiens

<400> 44

Ala Ser Cys Trp Asn Thr Ser Ala Glu Leu Leu Asn Lys Ser
1   5   10

<210> 45
<211> 14
<212> PRT
<213> Homo sapiens

<400> 45

Ala Tyr Gln Thr Ala Ser Val Val Asp Thr Val Ile Leu Pro
1   5   10

<210> 46
<211> 14
<212> PRT
<213> Homo sapiens

<400> 46

Arg Ser Arg Lys Lys Thr Val Pro Asp Ile Tyr Ile Cys Asn
1   5   10

<210> 47
<211> 14
<212> PRT
<213> Homo sapiens

<400> 47

Leu Cys Thr Ile Ile Thr Ser Leu Asp Thr Cys Asn Gln Phe
1   5   10

<210> 48
<211> 14
<212> PRT
<213> Homo sapiens

<400> 48

Cys Ala Phe Asp Leu Thr Ser Pro Asp Asp Val Leu Trp Tyr
1   5   10

<210> 49
<211> 14
<212> PRT
<213> Homo sapiens

<400> 49

Ala Phe Asp Leu Thr Ser Pro Asp Asp Val Leu Trp Tyr Thr
1 5 10

<210> 50
<211> 14
<212> PRT
<213> Homo sapiens

<400> 50

Ile Gln Arg Arg Ala Thr Glu Lys Glu Ile Asn Asn Met Gly
1 5 10

<210> 51
<211> 14
<212> PRT
<213> Homo sapiens

<400> 51

Thr Ile Ile Arg Ser Arg Lys Lys Thr Val Pro Asp Ile Tyr
1 5 10

<210> 52
<211> 14
<212> PRT
<213> Homo sapiens

<400> 52

Leu Pro Gln Ile Gln Arg Arg Ala Thr Glu Lys Glu Ile Asn
1 5 10

<210> 53
<211> 14
<212> PRT
<213> Homo sapiens

<400> 53

His Ala Ser Cys Trp Asn Thr Ser Ala Glu Leu Leu Asn Lys
1 5 10

<210> 54
<211> 14
<212> PRT
<213> Homo sapiens

<400> 54

Ser Ala Glu Leu Leu Asn Lys Ser Trp Asn Lys Glu Phe Ala
1 5 10

<210> 55
<211> 16
<212> PRT
<213> Homo sapiens

<400> 55

Leu Pro Ser Met Ile Gly Ile Ile Cys Ser Thr Gly Leu Val Gly Asn
1 5 10 15

<210> 56
<211> 16
<212> PRT
<213> Homo sapiens

<400> 56

Ile Ile Cys Ser Thr Gly Leu Val Gly Asn Ile Leu Ile Val Phe Thr
1 5 10 15

<210> 57
<211> 16
<212> PRT
<213> Homo sapiens

<400> 57

Gly Glu Trp Val Phe Gly Gly Pro Leu Cys Thr Ile Ile Thr Ser Leu
1 5 10 15

<210> 58
<211> 16
<212> PRT
<213> Homo sapiens

<400> 58

Ile Arg Ile Asn Leu Gly Leu Trp Ala Ala Ser Phe Ile Leu Ala Leu
1 5 10 15

<210> 59
<211> 16
<212> PRT
<213> Homo sapiens

<400> 59

Ile Lys Phe Lys Asp Gly Val Glu Ser Cys Ala Phe Asp Leu Thr Ser

1 5 10 15

<210> 60
<211> 27
<212> PRT
<213> Homo sapiens

<400> 60

Thr Cys Asn Gln Phe Ala Cys Ser Ala Ile Met Thr Val Met Ser Val
1 5 10 15

Asp Arg Tyr Phe Ala Leu Val Gln Pro Phe Arg
20 25

<210> 61
<211> 44
<212> DNA
<213> Homo sapiens

<400> 61
cccaagcttg caccatgaat ccatttcatg catcttgttg gaac 44

<210> 62
<211> 60
<212> DNA
<213> Homo sapiens

<400> 62
cgggatccct acttgtcgtc gtcgtccttg tagtccataa agtgtgattt cagagtgttc 60

<210> 63
<211> 99
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Random Primer.

<220>
<221> misc_feature
<222> (25)..(26)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (27)..(84)
<223> wherein "K" equals C, G, or T.

<400> 63
cgaagcgtaa gggcccagcc ggccnnknnk nnknnknnkn nknnknnknn knnknnknnk 60

nnknnknnkn nknnknnknn knnkccgggt ccgggcggc 99

<210> 64
<211> 95
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Random Primer.

<220>
<221> misc_feature
<222> (21)..(78)
<223> wherein "v" equals C, A, or G.

<220>
<221> misc_feature
<222> (79)..(80)
<223> n is a, c, g, or t

<400> 64
aaaaggaaaa aagcggccgc vnnvnnvnnv nnvnnvnnvn nvnnvnnvnn vnnvnnvnnv 60

nnvnnvnnvn nvnnvnnvnn gccgcccgga cccgg 95

<210> 65
<211> 5
<212> PRT
<213> Homo sapiens

<400> 65

Pro Gly Pro Gly Gly
1 5

<210> 66
<211> 37
<212> DNA
<213> Homo sapiens

<400> 66
gcagcagcgg ccgctccatg attgggatta tctgttc 37

<210> 67
<211> 37
<212> DNA
<213> Homo sapiens

<400> 67
gcagcagtcg acaaagtgtg atttcagagt gtttccc 37

<210> 68
<211> 37
<212> DNA
<213> Homo sapiens

<400> 68
gcagcagcgg ccgcatgaat ccatttcatg catcttg 37

<210> 69
<211> 34
<212> DNA
<213> Homo sapiens

<400> 69
gcagcagtcg accagcagga tgtagagaaa aggg 34

<210> 70
<211> 18
<212> DNA
<213> Homo sapiens

<400> 70
gcctttgggc agcttcct 18

<210> 71
<211> 25
<212> DNA
<213> Homo sapiens

<400> 71
cgtctttaaa tttgatgacc ttcga 25

<210> 72
<211> 24
<212> DNA
<213> Homo sapiens

<400> 72
tcctggcatt gcctgtctgg gtct 24

<210> 73
<211> 20
<212> DNA
<213> Homo sapiens

<400> 73
ttgatccgga tggtcttgta 20

<210> 74
<211> 20

<212> DNA
<213> Homo sapiens

<400> 74
cctctctgca ccatcatcac 20

<210> 75
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthesized Polypeptide.

<400> 75

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Thr Ile Ile Arg Ser Arg Lys Lys Thr Val Pro Asp Ile Tyr Ile Cys
1               5                   10                  15
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<210> 76
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 76
uucuuugccg agugugaaac cagcc 25

<210> 77
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 77
ccagcccugu ugaacagaua auccc 25

<210> 78
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 78
ccuuguucuc caacguguca gucga 25

<210> 79
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 79
uaaagcuucg ccacuucagu ucagc 25

<210> 80
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 80
acagucauga uggcacuaca ggcaa 25

<210> 81
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 81
acacaggcuu cugaugcauc acaga 25

<210> 82
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 82
ggcuuuggug gagaauaucu ucugc 25

<210> 83
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 83

gucuccucuu gcaacugagc accag 25

<210> 84
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 84
ucuuccauag gcucaccagc aguuc 25

<210> 85
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 85
uaagaccaug ucuggaucaa acucu 25

<210> 86
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 86
cagaactagc tagtcttcgg acaca 25

<210> 87
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 87
ttgcctctat aagaggtggt ttcgg 25

<210> 88
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

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<223>  Synthesized Oligonucleotide.

<400>  88
gaccagcagt caacgttctc ctctg                                            25


<210>  89
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  89
gcttagcacc actcggatac cttct                                            25


<210>  90
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  90
actctaacta ggtctgtacc agaat                                            25


<210>  91
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  91
uggaauugcc acaaacgcac uggug                                            25


<210>  92
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  92
acucuguauu cguccagcau gcuca                                            25


<210>  93
<211>  25
<212>  DNA
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<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  93
agcccaguuu cuugcagucg ugacc                                            25


<210>  94
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  94
uggugccaua caacagugag ugaug                                            25


<210>  95
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  95
ugagagucau caccuaggag uaucc                                            25


<210>  96
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  96
guggucagcc aaacaccguu aaggu                                            25


<210>  97
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  97
acugcuagca ccugcuuaug ucuca                                            25
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<210>  98
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  98
ccagugcuga cguucuuuga cccga                                              25


<210>  99
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  99
guagugagug acaacauacc guggu                                              25


<210>  100
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  100
ccuaugagga uccacuacug agagu                                              25


<210>  101
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  101
uguggauucu ucagcgugau ggcca                                              25


<210>  102
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  102
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acuuuggaag ccagcucgau gacac                                            25


<210>  103
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  103
auauuguacc cuucuccaag gccug                                            25


<210>  104
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  104
ucaagguacu caacaucucc caugg                                            25


<210>  105
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  105
uccaugguga acauccagau cuaca                                            25


<210>  106
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthesized Oligonucleotide.

<400>  106
gccagcuucc aucugcaucg gaaag                                            25


<210>  107
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
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<223> Synthesized Oligonucleotide.

<400> 107
gccaagaacc agcagucucc uacua   25

<210> 108
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 108
gccagcauac uucucaguga aacuc   25

<210> 109
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 109
caguucccau agugccagaa ccaga   25

<210> 110
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 110
ucauucacag gcagacgguc aucga   25

<210> 111
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 111
gaaaggcuac gucuaccuuc gaccu   25

<210> 112
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthesized Oligonucleotide.

<400> 112
aucauccucu gacgaccaag aaccg 25

<210> 113
<211> 25
<212> DNA
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<400> 113
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<400> 120
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<400> 126
uggcucccuc cuuccagaag acaca 25

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<400> 127
uuauggcagc auacuccagc aaggc 25

<210> 128
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<400> 128
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<210> 129
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<400> 129
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